

## Symbols

.NET 8, 16, 504  
 .Net 216  
 <mx:HTTPService> 305  
 @ declarative 241

## Numerics

9-slice scaling 417

## A

ABLogFile Viewer 487  
 absolute  
   sizing 77  
 abstract 363  
 AC\_OETags.js 515, 520  
 acceptDragDrop() method 449,  
   451–452  
 accordion 260–262  
   creating 260  
   interaction with 262  
   populating 261–262  
 accuracy 142  
 Action Message Format. *See* AMF  
 Action Recorder 504  
 ActionScript 13–14, 16, 20,  
   38, 42  
   chart classes 463  
   components 358, 372–374  
   conditional statement 51  
   creating events 423–425  
   data types 303  
   embedded in MXML 65

files 65  
 formatting 153  
 loops. *See* looping  
 namespace 378  
 printing 510  
 style manipulation 405  
 tidbits 58  
 validation 136  
 validation. *See* validator  
 variables *See* variable  
 views 289  
   with effects 434  
   working with 43  
 ActionScript Virtual Machine.  
   *See* AVM  
 addChild 284, 286  
 addChild 510  
 addedEffect property 422  
 addEventListener 223, 225, 332  
 addObject 509  
 addObject() 509  
 addPopUp() 272  
 Adobe  
   AMF format 308  
 Adobe Integrated Runtime.  
   *See* AIR  
 advanced item renderer. *See also*  
   item renderer  
 AdvancedDataGrid 19, 26, 172,  
   174, 177–178, 183, 185,  
   205–206  
   creation 173  
   support for drag-and-  
   drop 443  
 AdvancedDataGridColumn  
   174, 205

AdvancedDataGridColumn-  
   Group 178  
 AdvancedDataGridRenderer-  
   Provider 205–206  
 AdvancedListBase 156  
 Afterthought 487  
 AIR 15, 19, 24, 500  
   introduction 15–16  
 AJAX 8, 10–12, 14, 24, 260  
   limitations 11–12  
   sound effects 434  
 Alert 61, 488  
   class 276  
 alert 52  
   advanced, example 277–278  
   appearance, modifying  
     278–280  
   button callouts 277  
   button click 279  
   button labels 278  
   button order 277  
   button size 279  
   button, default 279  
   buttonLabel 279  
   buttons 277  
   buttonWidth 279  
 CloseEvent 278  
 closing 277  
 confirmation 277  
 creating 276  
 custom 226  
 custom handler 277  
 handler 277  
 icon 278  
 object static variables 278  
 owning object 277

alert (*continued*)  
   pop-up 94  
   position, changing 279  
   resizing 278  
   responding to 278  
   static variables 277  
   title 277  
   transparency, changing 279  
   window 246, 259  
   working with 276–280  
 alert event  
   broadcasting 217  
 Alert.show 277  
 algorithm  
   Luhn mod10 125  
 alias 252  
 allowMultipleSelection  
   property 445  
 allowNegative 120  
 Alpha 403  
 alpha 270  
   property 270–271  
 AMF 9, 12  
   format 308  
   overview 12  
 AMFPHP 161, 308  
 ampersand 320  
 AnimateProperty 429  
   effect 421, 427  
 animation 13  
 Another Neat Tool. *See* Ant  
 Ant 25  
 Apache 25  
 API Reference 26, 35–37, 42,  
   100, 110, 138, 395, 481  
 Apollo. *See* AIR  
 appendChild 327, 337  
 Application  
   container 84, 86, 248, 264  
   *See also* container: Applica-  
   tion  
 application  
   deployment 519–521  
   development, modular  
   385–388  
   execution 45  
   execution, controlling 491  
   root 217  
   server 160  
 ApplicationControlBar. *See also*  
   container  
   area chart 470–471  
   example 467  
   stacking 469  
 AreaChart 463

areaFill 482  
 AreaSeries 470  
 argument 346  
 Array 183  
   Fill 482  
 array 47–49, 56, 91, 158  
   associative 57–58  
   dot notation 58  
   explanation 54  
   functions 55  
   index 49  
   initialization 56  
   looping 56  
   nested 234  
   returned by web service 302  
   splice 55  
   of view states 289  
 ArrayCollection 91, 93, 104,  
   160–162, 210, 235, 465, 488  
   definition 159  
   hierarchical data 176  
   importing 235  
   looping 93  
 ASP 216, 493  
 assets 31  
 asynchronous token 304  
 AsyncToken 304  
 audio 13  
 auto-suggest 394  
 AVM 11  
 axis  
   category 466  
   chart, renderers 463  
   labels 466  
   value 466

---

**B**  
 background color 161  
 backgroundColor 404  
 bar chart 471–472  
   example 468  
   stacking 469  
 BarChart 463  
 base  
   class 140  
   state 282  
   tag 264  
 basedOn 287–288  
   example 288  
 behavior  
   defined 423  
 Bindable 333, 365, 367, 369  
 binding 170, 182, 221–223, 307,  
   362, 364–366, 368, 370

  in models 236  
   simple 66  
   two way 67–68  
   XML 332  
 BlazeDS 16, 19  
   introduction 16  
 blog 114  
 Blur effect 421, 428  
   properties 428  
 Box container. *See also* container  
 BPEL 317  
 braces 58  
 breakpoint 490–491  
 browser  
   compatibility 234  
   role 9–10  
 bubble 218  
 bubbleCollection 91, 93, 473–475  
   *See also* event  
 BubbleChart 464  
 BubbleSeries 473  
 build  
   application. *See* compile  
   built-in help 35–38  
   built-in validator. *See* validator  
   business intelligence 14, 473  
   business logic 151, 198, 357, 365  
   effect in response to 423–425  
   encapsulating 369  
 Business Process Execution  
   Language 317  
 Button 72, 105–106, 189  
   control 102  
   Hello! 72  
 button  
   alert 277, 279  
   callout 277  
   close 266  
   Display It 63  
   id 137  
   layout 76  
   size 279  
   Update my variable 67  
 ButtonBar 102, 104, 253, 256  
   dataProvider 104  
 buttonLabel 279  
 buttonWidth 279  
 Buzzword 282  
   view states 285  
 byte code 12

---

## C

C# 341  
 C++ 45, 341

- calendar 99–100
- call
  - frequency 494
  - stack 494
- CandleStick 464
- candlestick chart 475–477
- CandlestickChart 476
- CandlestickSeries 476
- Canvas
  - layout 77
  - See also* container
- captcha 114
- capture 218
- Cartesian class 463
- cascading 246
  - menu 234
- Cascading Style Sheets. *See* CSS
- cast 146
- catalog 90
- category 466
  - axis 466
- CDATA 63, 112, 320
- cell 201
  - editable 196
  - editing 200
  - formatting 188
- centerPopUp 266–267
- CFC 34, 356
- cfinclude 517
- change 179, 221
  - event 255
  - intercepting 362
- ChangeWatcher 222, 362
- channel 309
- channelSet 309–310
- character encoding 319
- Charles 298
  - Web Debugging Proxy 490
- chart
  - area 470–471
  - area, stacking 469
  - array series fill 482
  - axis 463
  - axis labels 466
  - bar 471–472
  - bar, stacking 469
  - bubble 473–475
  - candlestick 475–477
  - category axis 466
  - changing type 467–469
  - column 471–472
  - column, stacking 469
  - creating 465–469
  - customization 468
  - customizing 481–483
  - elements 463
  - HLOC 475–477
  - invoking 465
  - labels 463
  - legend 466–467
  - line 472–473
  - parts 463
  - pie 477–479
  - plot 479–481
  - renderer 463
  - series 463–466
  - series fills 481
  - single-color series fill 481
  - stacked 469–470
  - transparency 468
  - type property 469
  - types 463, 470–481
  - value axis 466
- charting 26
  - introduction 462–464
  - series 464–465
- check box 248
- CheckBox 107, 109
- checkpoint 198
- child 327
  - node 171
- childIndex 327
- children 176, 327, 357
  - declaration 234–235
- class 28, 37
  - base 342
  - creating 346–350
  - creation 340
  - effect. *See* effect
  - file 347
  - interface 348
  - methods 345
  - modifiers 347
  - naming 347
  - and objects, relationship 341
  - properties 346
  - properties, adding 350
  - superclass 348
  - theory 341
  - usage 61
- clean 382
- clearResult 302
- click 179
  - event 104–105
- clipboard 15
- close button 266
- CloseEvent 278
- closeField 476
- code
  - hinting 231, 311
  - maintenance. *See* refactor
  - reuse 218
  - validation 311
- code behind 358
- ColdFusion 4, 7, 18, 31, 36, 39, 45, 57, 90, 141, 143, 160, 216, 308, 310, 356, 493, 517–518
  - component. *See* CFC
  - data types 303
- collapse 171
- collection 90, 158, 183
  - broadcasting changes 158
  - class 160
  - component 159
  - filtering 209
  - initializing 159–160
  - populating 160–161
  - usage 159
- color 401–402
  - background 406
  - defining 402
  - named 401
  - numeric representation 402
  - See also* gradient
- ColorPicker 107, 112
- colspan 207
- column
  - header 161
  - property 206
  - referencing 206
  - resize 167
  - sortable 155
  - sorting 166–167
  - spanning 207–208
  - styling 172
  - width 165
- column chart 471–472
  - stacking 469
- ColumnChart 464
- columnIndex 206–208
- columnSpan 207
- columnWidth
  - property 165
- ComboBox 107, 186, 210, 357, 359, 411
  - icons 412
- comment 44
  - blocks 44
  - inline 44
  - multiline 44
  - usage of 44
- comments 327

- compile 33, 44–45
  - environment 22
  - script 25
- compiler 29
- complex data types 45, 47
- complexType 297
- component
  - ActionScript 372–374
  - adding event metadata 231
  - charting 26
  - Charts 27
  - composite 513
  - container 69
  - core 22
  - definition 34
  - editable 195
  - Image 93
  - Label 66
  - layout 79, 84
  - listening for events 217
  - Panel 34
  - position, changing with Move
    - effect 431
  - positioning 82
  - public domain 357
  - reusability 356
  - state, changing 291
  - style. *See* styles
  - Text 66–67
  - TextInput 66
  - visual 22
  - vs. module 385
- component, custom 28, 83, 252
  - base view state 282
  - composite 371–372
  - defined 356–357
  - example 356
  - extending 358
  - mechanics 357
  - namespace 377
  - parameters 359–365
  - retrieving a value from 366
  - simple 358
- composite component 371–372
- composite effect 425–427
  - See also* effect
- compression 381
- concat 345
- conditional statement 51
- configuration
  - XML 239
- confirmation 277
- Console 490
  - tab 30
- constant
  - defined 449
- constraint 79
  - basic 72–74
  - content-sized 74, 78
  - enhanced 78
    - See also* layout
  - fixed 74
  - offset 77
  - relative 74
    - See* layout
- ConstraintColumn 75–76, 78
- ConstraintRow 75–76
- constructor 160, 325, 373
  - defined 47, 350
- Container 189
- container 69–70, 83
  - Application 82–84
  - ApplicationControlBar 86
  - Box 84
  - Box, HBox, VBox 84–85
  - Canvas 83–84
  - ControlBar 86
  - DividedBox 86–87
  - Form 88
  - Grid 88–89
  - HBox 84
  - host 81
  - index 254
  - label 254
  - layout 70, 74
  - nesting 85
  - Panel 85
    - for printing 509
  - sizing 81
  - Tile 89–90
  - types 82–90
  - VBox 84
- content
  - interactive 184
- control
  - buttons 102
  - date 99–100
  - definition 34
  - getting values 109–112
  - numeric 100
  - real time 102
  - user input 96, 136
- ControlBar. *See* container
- convert 146
- cookie 521
- coordinates
  - layout 70
  - window 269
- copy
  - function 339
  - vs. move 445
- core classes 47
- corner rounding 394
- coupling 410
- createItemEditor 201
- createMenu 241
- createPopUp 265, 272
- creationComplete 106, 223, 289, 361, 374
  - event 406
- creationCompleteEffect
  - property 422
- Creative Suite 26
- credit card 125
  - American Express 125
  - Diners Club 125
  - Discover 125
  - MasterCard 125
  - Visa 125, 127
- CreditCardValidator 125–126
- criteria
  - matches value 137
- crossdomain.xml 410
- cross-platform issues 10–11
- CS3 416
- CSS 5, 10, 15, 24, 28, 38
  - changing drag-proxy icon 460
  - colors 402
  - embedding fonts 408
    - See also* Styles
  - style properties 397
  - styles 393
    - type definitions 396
- CSS 2.0 393
- Ctrl key 445–446
- curly brace 59, 160
- currency 143
  - format 128
- CurrencyFormatter. *See* formatter
- CurrencyValidator 128
  - See also* validator
- currentIndex 93
- currentItem 93
- currentState 283, 286–287, 293
- currentStateChange 283
- currentStateChanging 283
- currentTarget 109, 180, 219, 256, 259
  - property 452
- custom component 83
  - in ActionScript 372
- communication 364, 371–372

- composite 357, 371–372
  - custom events 374
  - defined 356–357
  - example 356
  - extending 358
  - inheritance 357
  - mechanics 357–358
  - namespace 377
  - parameters 359–365
  - property 360
  - retrieving a value from 366
  - simple 357–358
  - types 357
  - See also* component, custom
  - custom event 226–232, 374–376
  - See also* event
  - custom logic 151
- D**
- 
- dashboard 87, 102, 209
  - data
    - binding 66
    - broadcasting changes 235
    - change 221
    - driven control 158
    - editing 195
    - entry 204
    - extracting directly from
      - source form 274
    - extracting from parent 274
    - extracting using event
      - object 275
    - extracting via user-triggered
      - event 275
    - flat 208
    - hierarchical 208, 234, 236
    - integration 271
    - manipulating 201
    - property 201
    - retrieving from pop-up 273
    - sending to window 275
    - sharing 317
    - structure 321
    - synchronization 323
    - transform 177
    - tree structure 234
    - trekking 477
    - validation 505
  - data provider
    - choosing data type 240
  - data type
    - choosing for data
      - provider 240
    - primitive and complex 45–46
    - special 48
  - data types. *See* variable
  - database 154
  - dataField 168, 195
  - DataGrid 19, 165–169, 172, 180, 185, 187, 198, 411, 441
    - creation 166
    - interaction 179
    - printing 512
    - support for drag-and-drop 443
  - DataGridColumn 167–168
  - dataProvider 90, 158–159, 161, 167, 170, 189, 196, 253, 364, 442, 479
    - adding to explicitly 453
    - adding to implicitly 454
    - ButtonBar 104
    - introduction 90
    - with collections 158–159
  - Date 47
    - object 145–146
  - date 145
    - control 99–100
    - validation 120
  - date field 187
  - DateChooser 99–100
  - DateField 99–100, 121, 186, 189
  - DateFormatter 146
    - See also* formatter
  - DateValidator 122–123
    - See also* validator
  - day 120
  - Debug
    - Mode 490
    - Player 485
  - debug
    - application version 32
    - FxSpy 489
  - Debugger 490–491, 493
    - launching 490
  - debugging 485, 490–493
    - alerts 276
    - configuration 485
  - decimal 142
    - point precision 127
    - separator 127
  - decouple 111
  - deep linking 515
  - default 188
    - state 282
    - value 359
  - delete 339
  - deployment 17, 519–521
    - model 4, 6
    - path 384
  - descendant operator 336
  - descendants 327
  - design 7–8, 15, 19–20
  - design mode
    - introduction 34–35
  - Design View 395
  - desktop
    - clients 4
  - DHTML 10, 234
  - dialog
    - confirmation 277
  - direction
    - property 84, 89, 165
  - directory structure
    - duplicate 378
  - dispatcher 218
    - sending events 226–227
  - dispatchEvent 226, 375
  - display
    - dashboard 87
    - list 385, 388
    - object 220
  - displayName 467
  - Dissolve effect 421, 428
    - fonts 439
    - properties 429
  - DividedBox. *See* container
  - DMDScript 333
  - Document Type Definition 321
  - doDrag() method 449, 455, 459
  - domain 118, 123
  - dot notation 58
  - doubleClick 179
  - drag and drop 15, 463
  - drag image
    - changing 459–460
  - drag initiator 441
  - drag proxy 441
    - image, changing 460
  - drag source creation 441
  - drag-and-drop
    - accepting or denying 450–453
    - adding to non-List
      - components 454–459
      - components that support 443
      - custom 453–454
      - customizing icons 459–461
      - enabling on List-based
        - components 443
      - events 442
      - multiple items 445–446
      - preventing 451
      - process 441–442

drag-and-drop (*continued*)  
 two way 447–448  
 user-controlled sorting  
 448–449

dragComplete 442–443  
 event 455, 457

dragDrop 442–443  
 event 453, 455

dragEnabled 448  
 property 444, 447

dragEnter 442–443  
 event 449–450, 455

DragEvent.action property 456

dragExit 442

dragImage 459

DragManager  
 constants 449  
 COPY constant 449  
 functions 449  
 introduction 449  
 LINK constant 449  
 MOVE constant 449  
 NONE constant 449

dragMoveEnabled 448  
 property 445, 447

dragOver 442–443  
 event 456

dragStart 441, 443

Dreamweaver. *See also* IDE

drop  
 shadow 394  
 target 441–442

drop-down menu 234

dropEnabled 448  
 property 444, 447

DTD 321

dynamic help. *See* help

Dynamic HTML. *See* DHTML

dynamic type checking. *See* type  
 checking

## E

E4X 318, 333–339  
 accessing node by adjacent  
 node value 334  
 accessing node by property  
 value 334  
 accessing node property 335  
 accessing value by  
 position 334  
 assigning values 335  
 descendant operator 336  
 syntax 334  
 wildcard 337

easing function 437–439  
 custom 438  
 generator 439  
 types of 437

Eclipse 16, 26, 42  
 plug-in 27  
*See also* IDE

ECMA-262 333

ECMA-357 333

ECMAScript 14, 42, 45, 68, 333  
 for XML 333  
*See also* E4X

ecosystem 15–16, 19–20

editable 196

editing 198, 200  
 terminating process 202

editor 28  
*See also* IDE

editorDataField 198

Effect  
 object 425

effect  
 AnimateProperty 427  
 Blur 428  
 caused by 421  
 composite 421, 425–427  
 composite, parallel 421  
 composite, sequence 421  
 definition 420–421  
 Dissolve 428  
 Dissolve, fonts 439  
 Dissolve, properties 429  
 easing functions 437–439  
 Fade 426, 429  
 Fade, fonts 439  
 Fade, properties 429  
 filtering 291  
 Glow 423, 430  
 Glow, properties 430  
 in view transitions 290  
 Iris 431  
 Move 431  
 Move, properties 432  
 out of the box types 421  
 parallel 291, 426  
 Pause 432  
 programmatic 423–425  
 Resize 422, 433  
 Resize, properties 433  
 Rotate 434  
 Rotate, fonts 439  
 sequential 425  
 SoundEffect 434  
 SoundEffect, properties 435  
 SoundEffect, volume 434

triggered 421–423  
 types of 427  
 using ActionScript 423–425  
 using fonts 439  
 Wipe 435  
 Zoom 426, 436  
 Zoom, properties 436

effects 38

EJBs 4

element 327  
 chart 463

else statement 52

email 123, 137, 203  
 validation 123  
 verifying 114

EmailValidator 123–124, 204  
*See also* validator

Embed directive 409, 411

Embed function  
 9-slice properties 417

embedding  
 fonts *See* font

enabled 243

encapsulation 343, 367, 371

enforcement 115

Enter key 100, 200

Enterprise JavaBeans *See* EJBs

entity  
 XML 319

environment  
 compile 22  
 setup 22, 24  
 variable 23

Error  
 variable 47

error  
 message 142, 149, 151  
 property 148, 153

ErrorReportingEnable 485

Event  
 handler 41  
 JavaScript 40  
 overview 18–19

event 18, 38, 40  
 AdvancedDataGridEvent 199  
 available 138  
 binding 67, 221–223, 362  
 bubble 217  
 bubbling phase 218, 220  
 capture phase 218  
 change 100, 134, 158, 257–  
 258, 374  
 click 104–105, 135, 219, 221  
 close 266

creationComplete 191–192,  
 221, 227, 241, 289, 361, 367,  
 374, 406  
 custom 218, 226–232, 374–  
 376  
 dataChange 158, 192  
 DataGridEvent 199  
 definition 215  
 delivery system 217  
 dispatching 375  
 drag-and-drop 441–442, 450  
 dragComplete 455, 457  
 dragDrop 453, 455  
 dragEnter 449–450, 455  
 dragOver 456  
 evaluating 230  
 fake 227  
 fault 303–304  
 FaultEvent 303  
 flow 231  
 handler 40, 93, 96, 106, 109,  
 111, 131, 183, 225, 376  
 IndexChangedEvent 260  
 indexChangedEvent 255  
 item editor 195  
 itemClick 104–105, 158, 180,  
 183, 246, 256  
 itemDoubleClick 158  
 itemEditBegin 201  
 itemEditBeginning 198, 201  
 itemEditEnd 202–203  
 item-editing 198  
 itemRollOut 158  
 itemRollOver 158  
 JavaScript 41  
 List events 179  
 ListEvent 199  
 MenuEvent 244, 246  
 metadata, adding to  
 components' 231  
 model 42  
 mouseMove 449, 455  
 MouseOver 225  
 mouseOver 138  
 notification 217  
 object 41–42, 179, 181, 199,  
 244  
 object, passing 376  
 origination 217  
 phases 218  
 preinitialize 406  
 propagation, stopping  
 230–231  
 ResultEvent 301–303

sending and receiving  
 219–226  
 sending from pop-up 273  
 sending with dispatcher  
 226–227  
 stream 226  
 system 216–218  
 system, compared to Postal  
 Service 216  
 target phase 218  
 trigger 40, 156, 183  
 triggerEvent 135, 137  
 valueCommit 100, 118, 135  
 event listener 158, 219, 222,  
 227, 273, 314  
 adding 219–221  
 listening 283  
 priority attribute 230  
 removing 223–226  
 event.detail 277, 279  
 eventListener 227  
 eventPhase 218–219  
 example  
 photo album 422  
 execution  
 controlling 491  
 expand 171  
 expression 491  
 RegEx 130  
 Extensible Markup Language.  
*See* XML  
 External API 14  
 external style 400–401  
 when to use 401  
 external stylesheets 394

## F

FABridge 14  
 Fade effect 421, 426, 429  
 fonts 439  
 properties 429  
 fault  
 event 303–304  
 function 307  
 handling 304  
 FaultEvent 303, 310  
 feedback  
 real time 100  
 file  
 client side 520  
 size, with embedded  
 fonts 439  
 wrapper 25, 33  
 FileSystemDataGrid 185  
 fill 481  
 array 482  
 single color 481  
 FILL\_PAGE 508  
 fillColors 404  
 filter 100  
 effect 291  
 function 209–210  
 filterFunction 210  
 filtering 158  
 Firefox 23, 413, 487  
 request/response 216  
 Fireworks 7–8  
 skin design extension 416  
 fix  
 temporary 389  
 fixed sizing 81–82  
 Flash 8, 20, 420  
 editor 16  
 skin design extension 416  
 skins in 415  
 Flash animation. *See* SWF  
 Flash Debug Player 485  
 Flash Player 7, 11, 13, 18, 22, 33,  
 45–46, 70, 85, 515  
 framework caching 384  
 Flash Tracer 487  
 flashlog 486–487  
 flashvars 518  
 Flex 22  
 becoming acquainted 13–19  
 compared to web  
 applications 8  
 embedding in HTML 517  
 how it works 16–18  
 Profiler 494–497  
 taking advantage of Flash 13–  
 14  
 what's new 19  
 working with JavaScript 14  
 Flex Builder 16, 18, 24, 26,  
 138, 358  
 code hinting 231  
 Debugger 493  
 design mode 34–35  
 introduction 26–29  
 layout 30  
 plug-in 27  
 pricing 26  
 Profiler 493  
 standalone 27  
 styles 394  
 versions 25–26  
 views 31  
 wizard 311

Flex Builder (*continued*)  
 working with custom components 377  
 working with RSLs 384  
*See also* IDE

Flex by Adobe 7

Flex Properties 74

Flex properties 34

Flex Spy 489

Flex-AJAX Bridge. *See* FABridge

FlexLib 342

FlexPrintJob 507, 510

FlexPrintJobScaleType 507–508

FlexReport 515

FlexUnit 497–500  
 setup 497

Fluint 500–503

focus 195, 200  
 change 116

focusInEffect property 422

focusOutEffect property 422

font  
 embedding 407–408, 439  
 embedding using a file 408  
 embedding via System  
 name 407  
 Open Type 408  
 packaging in SWF 415  
 system 439  
 Tahoma 408  
 True Type 408  
 with effects 439

fontFamily 398, 407

footer 514

forEach 345

Form 97, 105  
 component 96  
 container 88

form 98  
 container 112  
 dynamic 90  
 item editor 195  
 item editor. *See* item editor  
 navigation 261  
 pop-up 271, 273–276  
 structure 261  
 validation 115, 135  
*See also* validator

format 154, 202  
 Function 145, 151–152, 154

formatString 144, 147, 149,  
 151, 153

formatted 188  
 result 151

formatter 139–140, 151–152,  
 154  
 class 140  
 component 151  
 custom 150  
 usage 139

formatters  
 types of 140–151

formatting 184  
 display 396  
 errors 153  
 real-time 139, 151  
 scripted 139, 151–153

FormHeader 88

FormItem 88

Frames 86

frames 13

framework 7, 16, 22, 155  
 caching 19  
 Flex 383

fromState 291

Function 47

function  
 call frequency 494  
 creation 62  
 declaration 62  
 duration 494  
 getter 352, 369–371  
 overriding 374  
 parameters 62, 346  
 passing a value with 359  
 passing data to 181  
 public 359, 366  
 refresh 177  
 return value 346  
 scope 62  
 setter 351, 354, 363, 370  
 usage 61  
 using to retrieve data 365

functional testing 493,  
 503–505

functions 36  
 functions calling 64

FunFX 503

FxSpy 489

## G

garbage collection 495

Garcia, Frederico 515

geocentric 356

get 352

getStyle 406

getter 351, 369–371

GIF 409

Glow effect 421, 423, 430  
 properties 430

gradient 404  
 transparency 404  
 used for a chart series 467

Graphics class 419

Grid container. *See also* container

GridItem 88

GridRow 88

Groleau, Timothee 439

groupedColumns 178

GroupingCollection 177  
 definition 159

guidelines 74

## H

Halo 419

handleMenuClick() 246

Hatcher, Erik 25

HBox 189, 264  
*See also* container

HDividedBox. *See* container

header 514

headerColors 404

hello world 31–34

help 36

hexadecimal 402

hideEffect property 422

hierarchical  
 data 177  
 display 175  
 information 169

HierarchicalData 175

highField 476

hint 232

history 520

HLOC chart 475–477

HLOCChart 464

HLOCSeries 476

horizontal  
 layout 79

Horizontal Box 84

horizontalAxis 472

horizontalCenter 73, 81

HorizontalList 163–164, 185  
 support for drag-and-drop 443  
*See also* List

HP 504

HSlider 101

HTML 9–10, 12, 14, 16, 24–25,  
 39, 42, 65, 102, 319

CheckBox 107

- control 97
  - creating drop-down menus 234
  - event 225
  - Form 97, 100
  - form 88, 99, 108
  - frames 86
  - layout 71, 78–79
  - page 281
  - styles 394, 397–398, 407
  - table 88, 165, 205, 207
  - validation 113
- HTTP 11
  - response codes 307
- HTTP web service
  - connecting to 306–307
  - vs. SOAP web service 305
- HTTPService 273, 294, 301, 303, 306, 325
  - fault, handling 304
  - generating on the fly 307
  - retrieving results 305–308

---

**I**

- icon 171, 411–413
  - embedding 411
  - properties 413
  - property 411
  - with a list 411
- iconField 156, 412
- id property 97
- IDE 7, 16, 21, 24, 26, 42
  - Aptana Studio 24
  - extensions 25–26
  - no cost option 22–26
- if statement 51–52
- IFlexDisplayObject 266
- ignoreComments 325
- ignoreProcessingInstructions 325
- ignoreWhiteSpace 325
- Illustrator
  - skin design extension 416
- image 409–411
  - embedding 190, 409
  - import 279
  - loading 409
  - packaging in SWF 415
  - slicing 417
  - types 409
  - using as a variable 410
- Image component 93, 193, 410
- images 13
- IModuleInfo 387

- implements 37
- Import Web Service Wizard 312
- index 256
- indexed array 55
- information
  - nested 235
- inheritance 37, 359
  - concepts 342–343
- inherited style 395
- InitializeMenu() 241
- inline style 394–396
  - skinning with 414
  - when to use 396
- inputFormat 121
- insertChildAfter 338
- insertChildBefore 338
- int 46
- integer 119
- integration
  - skin design 416
- interface 387
  - definition 348
- internal
  - scope 348
- Internet Explorer 23
  - request/response 216
- interpolateValues 473
- Invalid Format 142
- Invalid format 154
- Invalid Value 142
- Invalid value 154
- IOVERRIDE 284, 287
- Iris effect 421, 431
- item editor 195–204
  - creating 196
  - default 196
  - invoking 201
- item renderer 172, 188–195
  - adding logic to 190
  - advanced 205
  - creating 189
  - drop-in 189, 193
  - inline 189, 193
  - regular 189
  - types of 189
- item renderer and editor 204–205
- itemClick 104–105, 179
- itemClickEvent 110
- itemEditBegin 198, 201
- itemEditBeginning 198, 200
- itemEditEnd 198, 202, 204
- IUIComponent 452–453

---

**J**

- J2EE 32
- Java 4, 8, 16, 18, 25, 45, 90, 341, 504
  - web service 309
- Java 2 Platform, Enterprise Edition. *See* J2EE
- Java Message Service. *See* RTMP and JMS
- Java Runtime Environment. *See* JRE
- JavaFX 6, 8
- JavaScript 5, 10–12, 14, 17–18, 24, 33, 39, 42, 45, 59, 99, 113, 234, 515
  - debugging with alerts 276
  - embedded 65
  - event 41, 225
  - getElementByID 97
  - specification 333
  - validation 125
- JavaScript Serialized Object Notation *See* JSON
- JMS 16
- JPG 409
- jQuery 11
- JRE 22
- JSON 24
- JSON-RPC 490
- JSP 517
- JUnit 497

---

**K**

- key
  - arrow 135
  - Ctrl 445–446
  - Enter 135
  - looping over 336
  - Tab 135
- keyboard stroke 114
- keyword
  - bindable 67
  - this 265

---

**L**

- label 162, 243
  - chart 463
  - property 387
  - specifying 162
- Label control 97–98

- label function 184–188
    - multicolumn 185, 187–188
    - parameters 188
    - single column 185–187
  - labelField 162, 172
  - labelFunction 157, 168, 247
  - Language Reference
    - adjusting styles with 395
    - icon properties 413
    - styles 404
  - lastResult 301
  - Laszlo Systems 8
  - layers 13
  - layout 69, 96
    - absolute 70–71, 74, 83
    - absolute drawback 70
    - automatic 79, 84
    - constraint 72, 83
    - direction 79
    - horizontal 87
    - offset 78
    - property 82, 84–85, 248
    - relative 73
    - vertical 87
  - Layout. *See also* Repeater
  - LCDS 16, 19, 161, 310
    - messaging 309
  - legend 466–467
  - length
    - function 336
    - property 327, 346
  - library project 389
    - creating 382
  - line chart 472–473
    - example 464
  - line series 466
  - lineage 357
  - linear motion 437
  - LineChart 464
  - link 400
    - type 384
  - LinkBar 102, 104, 253, 256
  - LinkButton 102
  - Linux 24, 485–486
  - List 156, 166, 186, 196, 209, 411
    - component 156, 161–163
    - customization 184
    - events 157
    - genealogy 155–158
    - interaction 178–183
    - navigation 261
    - printing 512–514
    - support for drag-and-drop 443
  - ListBase 156
  - List-based component
    - drag-and-drop, enabling 443
  - listener 67, 116, 220
    - functions 225
    - removing 223–226
  - listening 283
  - LiveCycle Data Services. *See* LCDS
  - local style 394, 396–400
    - skinning with 415
    - when to use 399
  - log viewer 487
  - logging
    - configuring 485
  - logic
    - adding to an item renderer 190
  - logical operators 59
  - looping 48, 93
    - array 49, 56
    - do while loop 51
    - for each..in loop 50, 57
    - for loop 49, 56
    - for..each 336
    - for.in loop 49, 57
    - through states property 293
    - while loop 50–51
    - XML 49, 334
    - XMLList 49
  - loose coupling 344
  - Loughran, Steve 25
  - lowField 476
  - Luhn mod10 125
- ## M
- 
- MAC OS X 485–486
  - macro communication 229
  - manual positioning 82
  - mask 431
  - MATCH\_HEIGHT 509
  - MATCH\_WIDTH 509
  - mathematical operators 60
  - MaxWarnings 486
  - media asset 409
    - packaging in SWF 415
  - Menu 241
    - data for 234–240
  - menu
    - cascading 234
    - coordinates 242
    - creating 240–242
    - customizing items 242
    - drop-down 237
    - positioning 242
    - U.S. states 356
    - user interaction with 244–246
  - menu bar 246–251
    - creating 247
    - customizing items 248–249
    - positioning 248
    - user interaction with 249–251
  - menu item
    - selection 250
  - MenuBar 246
    - data for 234–240
    - events 249
  - MenuItem 244
    - properties 250
  - Mercury Interactive 504
  - merged to code. *See* RSL
  - messaging
    - in LCDS 309
  - Metadata 375–376
  - metadata
    - event, adding to components 231
  - meta-language. *See* XML
  - method 37, 345
    - argument 346
    - getter and setter functions 352
    - parameters 346
    - See also* function
  - minField 470
  - mm.cfg 486
  - modal window 265
    - placement 269
  - model
    - example 236
    - introduction 235
  - modular application
    - development 385–388
  - module 380, 385–388
    - creating 385
    - loading and unloading 387
    - pros and cons 388
    - vs. component 385
  - ModuleBase 387
  - ModuleLoader 387
  - ModuleManager 387
  - monitoring
    - network activity 489
  - month 120
  - motion
    - linear 437
  - mouse click 135
  - mouseDown 441–442
  - mouseDownEffect property 422

mouseMove 441–442  
   event 449, 455  
 mouse-over 114  
 mouseUpEffect property 422  
 move  
   vs. copy 445  
 Move effect 431  
   properties 432  
 Move effect effect 421  
 moveEffect property 422  
 multicolumn 185  
 multiroot 171  
 multithreading 13  
 MX namespace 377  
 mx.states  
   declaration 287–289  
   key properties 287  
   view state classes 284  
 mx.states.State 287  
 mx:AddChild 284  
 mx:RemoveChild 284  
 mx:SetEventHandler 284  
 mx:SetProperty 284  
 mx:State 284  
 MXML 16–17, 20, 33–34, 38, 42, 63, 152, 196  
   ActionScript embedded 65  
   charts 463  
   component 97, 150, 252, 358  
   declarative 284  
   effect. *See also* effect  
   structure 38  
 MXML and ActionScript  
   overview 38–42  
 MXMLC 25  
   *See also* compiler

**N**

---

named color 401  
 namespace 252, 322, 377–378  
   ActionScript 378  
   directory structure 377  
   duplicate 378  
   MX 377  
 NaN 48  
 navigation  
   accordion 260–262  
   components 323  
   tabbed 257–260  
   in view stack 253–254  
 nested  
   array collection 235  
   data 176  
   information 235

  structure 236  
   nested array 234  
   syntax 234  
 nesting. *See* container  
 network  
   activity, monitoring 489  
 new  
   operator 345  
 newIndex 255  
 Nitobi 14  
 node 171  
   looping 336  
   name 236  
   top-level 247  
 Notepad 24  
 notification 217  
 null 48, 287  
 Number 46  
   *See also* variable  
 NumberFormatter 142  
   additional properties 141  
   *See also* formatter  
 NumberValidator. *See* validator  
 numeric  
   color 402  
   controls 100–102  
 NumericStepper 100

## O

Object  
   property looping 50  
 object 36–37, 58, 91  
   accessing outside caller  
     function 276  
     anonymous 314  
     children 69  
   and classes, relationship 341  
   conversion 487  
   creating on the fly 276  
   definition 46  
   discrete, creating from web-  
     service result 311  
   external, matching with  
     internal 311  
   internal, matching with  
     external 311  
   primitive 345  
   size 495  
   theory 341  
   untyped 311  
   working with 344–346  
 object oriented  
   concepts 340, 342–343  
   function 341

  methods 341  
   properties 341  
   theory 341–344  
 object-oriented language.  
   *See* OOP  
 object-oriented programming.  
   *See* OOP  
 ObjectUtil 488  
 OLAPDataGrid 185  
 oldIndex 255, 260  
 OOP 35, 42–43, 46, 155  
 Open Type font 408  
 openField 476  
 operation  
   definition 297  
   tag 299  
 operator  
   comparative 60  
   logical 59–60  
   mathematical 60  
 overhead  
   avoiding 241  
 overlap  
   layout 70–71  
   *See also* layout  
 overrides 288

## P

package 37, 62  
   creation 340, 347  
   import 63  
   name, updating 378  
 page  
   stateless 281  
   static 281  
 pane  
   resize 87  
 Panel 98  
   component 34  
   *See also* container  
 panning 434  
 parallel effect 291  
   *See also* effect  
 parameter  
   bound 364  
   explicit binding 307  
 parent 242  
   class 374  
 parsing  
   XML 320  
 patching 380, 389  
 Path  
   environment variable 23

- pattern
  - mask 144
  - matching 131
- Pause effect 421, 432
- percentage 81
- performance 46
  - layout 70
- PERL 216
- Persistent Framework Cache.
  - See* PFC
- perspective 29
  - customization 30
  - debug 29
  - development 29
  - profiling 30
- PFC 19
- phase
  - of events 218
- phone number 147, 151
  - international 129
  - North American 129
  - validator 130
  - verifying 114
  - wrong length 129
- PhoneFormatter 147, 153
- PhoneNumberValidator 129
  - See also* validator
- photo album 261
  - example 422
- Photoshop 7–9, 15
  - skin design extension 416
- PHP 18, 32, 216, 493, 517
- picklist controls 107–109
- pie chart 477–479
- PieChart 464
- plot chart 479–481
- PlotChart 464
- PNG 409
- PolarChart class 463
- pop-up 276
  - ActionScript tags 264
  - alert 276–280
  - base tag 264
  - centering 267, 269
  - closing 266
  - communication 271–276
  - creating 263–266
  - data integration 271–276
  - data, retrieving 273
  - events, and inheritance
    - chain 273
  - events, sending 273
  - example 264
  - file name 265
  - form 271, 273–276
  - icon 279
  - initialization 263
  - MXML tags 264
  - opening 264–266
  - parent 265
  - placement, calculating 267–270
  - positioning 266–270
  - scope 265
  - transparency 270–271
- PopUpButton 103, 105–106
- PopUpManager 264–266
- PopUpMenuButton 103–106
- popupMessage 274
- portlet 517
- porttype 313
- position 70
  - of an alert 279
- positioning 71
  - layout 71
  - manual 82
  - a menu 242
- postal code 148
  - Canada 133–134
- precision 119, 141
- preinitialize event 406
- preloader 82
- prependChild 337–338
- presentation 184
- prettyIndent 326
- prettyPrinting 326
- preventDefault 201
- preventDefault() method 452
- primitive data types 45–46
- print
  - custom component 511
  - spooler 508
- PrintAdvancedDataGrid 507
- PrintDataGrid 185, 507
  - support for drag-and-drop 443
- printing 506–515
  - custom component 512
  - Flex's approach 507
  - layout 512
  - lists 512–514
  - scaling 508
  - tools 507
  - using ActionScript 510
- printJob 514
- PrintOLAPDataGrid 507
- priority attribute 230
- private
  - scope 342, 363, 369
- production
  - deploying to 521
  - production build
    - creating 519
  - Profiler 25, 494–497
    - launching 495
  - profiler 19, 30
  - profiling 493–497
  - programmatic skin. *See* skin
  - progress bar
    - preloader 82
  - project 33
    - assets 27
    - creation 31
    - navigation 28
    - output directory 32
    - wizard 31
  - promptingTextInput 342
  - proof of concept 396
  - propagate 370
  - propagation
    - of events, stopping 230–231
  - property 37
    - auto-suggest 394
    - currentIndex 92–93
    - currentItem 92–93
    - dataProvider 91
    - height 81
    - reference 334
    - static 364
    - using to retrieve data 366
    - width 81
  - protected
    - scope 342
  - prototyping 34, 193
  - public
    - function 366
    - scope 348–349, 369
  - public property 274
  - Python 216

---

**Q**

- QTP 504
- QuickTest Pro 504

---

**R**

- radio button 248
- RadioButton 107, 109
- RadioButtonGroup 110
- range selection 446
- Rational Functional Tester 504
- raw data
  - formatting 188

- RDA 15
  - Real Time Messaging Protocol.
    - See* RTMP
  - real-time formatting 154
  - refactor 19
  - refactoring 380, 389
  - reference
    - event 220
    - updating 390
  - reformat 142
  - RegEx 130, 132
  - RegExp 48
  - RegExpValidator 131–132
  - regular expression 130–132
  - relatedObject 255–256, 260
  - relative
    - layout 72
    - sizing 77, 81
  - release build 520
  - Remote object 299
    - testing 490
  - remote object 465, 489
  - RemoteObject 160, 273, 294, 301, 306
    - connecting 309
    - fault, handling 304
    - FaultEvent 304
    - products that allow native use 308
    - using 308–310
  - RemoveChild 284, 286
  - removedEffect property 422
  - rendererProviders 206
  - Repeater 90–91
    - creating 92
    - event 92–94
    - properties 92
    - working with 90–94
  - report 515
  - Representational State Transfer.
    - See* REST
  - request 216
  - requiredFieldError 115
  - reserved words 48
  - resize 72
    - real time 100
  - Resize effect 421–422, 433
    - properties 433
  - resizeEffect property 422
  - resource
    - bottlenecks 494
  - response 216
  - REST 299, 305
  - result 299
  - ResultEvent 299, 301
  - ResultEvent.token 305
  - return on investment. *See* ROI
  - return type 62
  - reusability 61, 83, 111–112, 153, 161, 179, 181, 218, 226, 232, 246, 259, 355–356, 380–381, 396, 454
    - images 410
    - modules 385
    - package. *See* package
    - styles 401
  - reverse domain notation 347, 378
  - RGB 46, 401
    - saturation 402
  - RIA 5–6, 8, 11, 13–14, 20, 22, 155, 435
    - best of both worlds 6
    - in comparison to RWA 12–13
    - contenders 6–8
    - how they do it 6
    - richness evaluation 11
    - solution 5–6
  - RIATest 503
  - Rich Desktop Applications. *See* RDA
  - Rich Internet Applications. *See* RIA
  - Rich Web Applications. *See* RWA
  - RichTextEditor 98
  - ROI 11
  - rollOutEffect property 422
  - rollOverEffect property 422
  - root
    - of application 217
    - multiple 238
    - single 171
    - tag 318
    - XML 237
  - Rotate effect 421, 434
    - fonts 439
    - properties 434
  - rounding 141–142
  - row
    - header 166
    - record 189
    - selected, accessing
      - directly 182
    - spanning 208–209
    - styling 172
    - summary 208
  - RSL 381–385
    - cache 385
    - cross-domain 381
    - framework 381, 384
    - importing 384
    - merged to code 384
    - patching applications 389
    - standard 382–383
    - types 381
  - RSS 317
  - RTMP 9, 12
  - rules
    - XML 63
  - runtime
    - setting styles 405
  - runtime shared library. *See* RSL
  - RWA 8, 10, 13–14
    - the last stand 10
- 
- S**
- SabreAMF 308
  - sandbox security model 410
  - SAP
    - testing 505
  - Scalable Vector Graphic. *See* SVG
  - scaleGridBottom 417
  - scaleGridLeft 417
  - scaleGridRight 417
  - scaleGridTop 417
  - scaling. *See* image slicing
  - scope 62
    - internal 342
    - pop-up 265
    - private 342
    - protected 342
    - public 342
    - purpose of 342
    - static 342
  - Script 491
  - scrollbar 164
  - scrolling 165
  - SDK 7, 16, 18, 21–22, 24, 42
  - SDLC 18, 493
    - with Flex 18
  - selectedChild 254, 258, 262
  - selectedIndex 157, 181, 247, 254–255, 258, 262, 366
  - selectedItem 157, 180–181, 366, 369
  - selectedValue 109, 368
  - send 306
  - sendHttpRequest() 306
  - Sequence effect 291
  - sequential effect 425
  - series
    - array fill 482
    - chart 463

- series (*continued*)
  - fills 481
- server
  - responses, handling 301
- ServiceCapture 298, 490
- set 351
- setProperty 284, 286
- setStyle()
  - guidelines for using 405
- setter 351, 369
  - function 363
- SFW file
  - size 385
- shell 23
- shortcuts 58
- show() 242
- showCloseButton 266
- showFeedback() method 449, 456
- showRoot 171, 242
- Siebel
  - testing 505
- Silverlight 6–8
- Simple Object Access Protocol. *See* SOAP
- size
  - layout. *See* layout
- sizing
  - fixed 81–82
  - variable 81
  - variable. *See also* layout
- skin 413–419
  - design extensions 416
  - graphical 413, 415
  - graphical, with images 413
  - Halo 419
  - programmatic 413, 418
  - types of 413
- skinning
  - with inline styles 414
  - with local styles 415
- slide range 210
- slider 102, 112
- snapInterval 101
- SOAP 12, 295, 299, 490
  - result, working with 302–303
- SOAP web service
  - vs. HTTP web service 305
- Social Security Number. *See* SSN
- SocialSecurityValidator 133
  - See also* validator
- Software Development Kit. *See* SDK
- SolidColor 482
- sortable property 167
- sortableColumns 167
- sortExpertMode 174
- sorting 158
  - with drag-and-drop 448–449
- sound
  - packaging in SWF 415
  - SoundEffect effect 435
- SoundEffect effect 421, 434
  - properties 435
  - volume 434
- source 115, 310
  - code 31
  - property 236, 239, 324–325, 330
- Spacer 81
  - See also* layout
- spam 114
- spanning rows 208–209
- splice 55
- split 345
- spool 508
- Spry 11, 260
- SQL Server Enterprise Manager 9
- SSN 131–132
  - pattern 133
  - rule 132
- stack
  - determining selection 254
- stage 74
- staging 310
- staging environment
  - deploying to 521
- state
  - active 283
  - base. *See also* view state
  - class 287–288
  - default 282
  - modifying 289
  - override 289
- stateless page 281
- states 34
- states property 282–283, 289
  - looping through 293
- static
  - page 281
  - property 325, 364
  - type checking. *See* type checking
  - vs. dynamic type checking 45
- stock price
  - charting 476
- stopImmediatePropagation 230
- stopPropagation 230
- strict data typing 45
- String 64, 145, 162, 186
  - constructor 47
  - See also* variable
- StringValidator 117
  - See also* validator
- Struts 4
- style 393–406
  - class definition 396–398
  - external 400–401, 405, 413
  - external, when to use 401
  - getting 406
  - inherited 395
  - inline 394–396, 402, 413
  - inline, skinning with 414
  - inline, when to use 396
  - local 394, 396–400
  - local, skinning with 415
  - local, when to use 399
  - properties 394–395, 398
  - reference 395
  - tag 400
  - type definition 396–397
  - working with
    - programmatically 405–406
- Style Explorer 401
  - gradients 404
- styles 38
- stylesheet 38, 520
- for skins 413
- styling
  - in Flex Builder 395
- subclass 37, 343
- superclass 228
  - See also* class
- SVG 409
- SWC 383
  - definition 381
  - patches 389
- SWC file 381
  - converting classes to 382
  - deploying 384–385
- SWF 409
  - graphical skins and 415
  - switch statement 51, 53–54
- SwitchSymbolFormatter 150–151
  - See also* formatter
- SWZ file 383
- symbol 416
- syntax 46
- systems development life cycle 8
- Systems Development Life Cycle. *See* SDLC

**T**

- 
- tab 258
  - tab navigator 257–260
    - creating 258
  - TabBar 253, 256–257
  - tabbing 200
  - TabNavigator 257
    - interaction 258
  - Tahoma font 408
  - target 219
    - phase 218
  - targets
    - Array 291
  - test
    - case, creating 498, 501
    - executing 499
    - runner 497, 500
    - runner, creating 497, 501
    - sequencing 500
    - suite, creating 502
    - types 493
  - testing 493–505
  - TestSuite 497
  - Text
    - component 196
    - control 97–99
  - text
    - property 117
  - TextArea 98, 508
  - TextInput 67, 97, 117, 120–122, 125, 137, 196, 210, 342, 360
  - theme 381
  - theory 340
  - Thermo 15
  - this
    - scope 352
  - thumb 101
  - thumbnail
    - displaying 261
  - tick 101, 475
  - tight coupling 253
  - Tile 165
    - container 89
  - TileList 164–165, 185
    - direction 164
    - support for drag-and-drop 443
  - time field 187
  - timeline 13
  - TitleWindow 86, 264
    - close button option 266
  - ToggleButtonBar 103–104
  - token 305
    - asynchronous 304
  - toState 291
  - toString 487
  - trace 486
    - log 29
    - log viewer 487
  - trace() 486
  - TraceOutputFileEnable 485
  - TraceTarget 489
  - transition
    - between views 290
    - effects 290
  - Transition property 284
  - transparency 29, 394, 427
    - of an alert 279
    - in a chart 468
    - of a chart series 467
    - controlling 403–404
    - window 270–271
  - Tree 156, 169, 171–172, 175, 185, 411
    - creation 170
    - support for drag-and-drop 443
  - tree
    - data 236–237, 317
  - trigger 116, 134, 137, 421
    - validation 118
  - triggerEvent 116–117
  - True Type font 408
  - type
    - event 219
  - type checking
    - dynamic 45
    - static 45
- 
- U**
  - UDF 356
  - UI 97
    - interaction 72
  - UIComponent 348–349, 508
    - currentState 283
    - currentStateChange 283
    - states 283
    - view state–related events 283
    - view state–related properties 283
  - uint. *See* variable
  - undefined 48
  - underscore 350
  - unit testing 493, 497–500
  - unloadModule 388
  - unwatch 223
  - URL 309
  - URLLoader 308, 310–311, 325, 331
    - creating 310
  - usability 4, 10, 113, 135
  - user
    - acceptance 519
    - as event instigator 216
    - group 522
  - user experience
    - user demands 5
  - user input 98
    - capturing 96
  - user-defined function. *See* UDF
- 
- V**
  - validate 154
    - ZIP Code 134
  - validating 202
  - validation 311
    - committed value 114, 135
    - data 321
    - overview 114–115
    - and parameter binding 308
    - pass-through 114, 135
    - real time 114, 134–135
    - scripted 114, 136
    - tidbits 137
  - validator 114, 119, 123, 137, 139, 154
    - built-in 115
    - class 115
    - types of 115–134
  - value
    - matches criteria 137
    - passing as a property 360
    - passing with a function 359
    - retrieving 365–371
  - value axis 466
  - valueCommit 100
  - Variable
    - object 47
  - variable
    - Boolean XE 46
    - complex 47
    - data typing 45
    - definition 44
    - global 82
    - naming 45
    - Number 46
    - primitive 46
    - public 196
    - sizing 81
    - special data type 48
    - String 46
    - types of 44–48

variable (*continued*)  
 uint 46  
 watching 492–493  
 VBox 261, 264, 377, 509  
 with accordion 261  
*See also* container  
 VDividedBox. *See* container  
 version control 505  
 vertical  
 layout 79  
 Vertical Box 84  
 verticalCenter 73, 81  
 VGA 401  
 video 13  
 view 281, 491  
 base view state 282  
 transition 290  
 view stack 251–257  
 adding navigation 253–254  
 creating 251–253  
 interaction with 255–257  
 view state 79  
 array 289  
 base 286  
 classes 284–285  
 with components 291–293  
 creating with  
 ActionScript 289  
 declaration 287–289  
 effects 291  
 example 285–287  
 introduction 281–282  
 name 288  
 nesting 288  
 nesting, example 288  
 transition 290  
 transitions 289–291  
 uses 282  
 working with 282–293  
 views  
 console 29  
 design 29  
 problems 29  
 views and perspectives 29–31  
 visible 169  
 property 191  
 visible property  
 Wipe effects 436  
 void 48  
 volume  
 SoundEffect effect 434  
 VSlider 101

## W

W3C 10  
 watch 223  
 watermark 462  
 web application  
 document premise 9  
 drawback 4–5  
 embedding Flex 517  
 prolific nature of 4  
 Web Service  
 wizard 311–315  
 web service 176, 312, 465, 489  
 custom, calling 314  
 fault event 303–304  
 generated code 313–315  
 result, working with 302–303  
 results, handling 301  
 testing 490  
 and XML 317  
 web services 9  
 Web Services Definition Language. *See* WSDL  
 WebORB 308  
 WebService 160, 273, 294, 299,  
 301, 306, 308  
 fault, handling 304  
 FaultEvent 304  
 WebService component  
 298–305  
 calling 300  
 creating in ActionScript 300  
 creating in MXML 298–300  
 WebService.getOperation 300  
 webserviceID.operationname  
 (parameters) 300  
 well-formed 318  
 white space 38  
 wildcard  
 in E4X 337  
 WinAmp 413  
 window 72  
 modal 265  
 modal, placement 269  
 object 265  
 placement 268  
 placement, calculating 267–  
 270  
 pop-up 86, 263  
 sending data to 275  
 transparency 270–271  
 Windows 2000/XP 485  
 Windows 95/98/ME 485  
 Windows 95/98/ME/2000/  
 XP 486

Windows Vista 485–486  
 WinZip 381  
 Wipe effects 435  
 WipeDown effect 421  
 WipeLeft effect 421  
 wipeLeft effect 291  
 WipeRight effect 421  
 WipeUp effect 421  
 wizard 19, 28  
 class 228  
 project 31  
 web services 311  
 word wrapping 155  
 wordWrap 157  
 wrapper  
 customizing 515–519  
 deployment 520  
 essentials 516  
 file 25, 33  
 files 515  
 parameter 517–519  
 template 516  
 WSDL 302  
 consuming 298–305  
 definition 295  
 interpreting 295–298  
 WSDL document  
 input types 296  
 introduction 295  
 operations 295  
 output 297–298  
 wsdl:input 296  
 wsdl:operation 296  
 wsdl:output 297  
 wsdl:portType 296

## X

XML 11, 17, 38, 146  
 ActionScript classes 323  
 attributes 319  
 benefits 317  
 binding 332–333  
 binding to 332  
 case sensitive 321  
 CDATA 320  
 children 338  
 class 236, 324–328  
 class, lack of source  
 property 331  
 class, properties 325  
 communication between cli-  
 ent and server 299  
 component 236, 323

- components and classes
    - 323–331
  - configuration file 239
  - data 160, 237
  - data type 48
  - data type definition 322
  - data, storing 319
  - declaration 319
  - definition 316
  - DTD 321
  - E4X 333–339
  - editing 24
  - entity 319
  - external files 331–332
  - file, referencing 323
  - formatting 326
  - fragment 237, 336
  - functions 327–328
  - limitations 318
  - looping 49
  - namespace 322
  - object 158, 325
  - object, pointing to 330
  - primer 316–323
  - root tag 318
  - rules 318
    - structured 326
    - structured data 169
    - syntax 318
    - well-formedness 318
      - and XMLListCollection 330
  - XML rules 63
  - XML Schema 321–322
  - XML structure 317, 335–339
    - acquiring descendents 336
    - acquiring nodes by
      - wildcard 337
    - looping over 335
    - looping over nodes 336
    - looping over nodes in XML
      - fragment 336
    - node, copying 339
    - node, deleting 339
    - nodes, inserting 338
    - nodes, prepending and
      - appending 337
  - XMLHttpRequest 10–11
  - XMLList 49, 158, 170–171, 175, 237, 336
    - class 329
    - component 329
    - component, invoking 329
    - data type 48
      - pointing to 330
  - XMLListCollection 238, 330
    - definition 159
  - xmlns 313, 322
    - See also* namespace
  - XSD 322
- Y**
- 
- year 120
- Z**
- 
- Z index 234
  - ZIP Code 148
    - format 133
    - United States 133
    - validate 134
  - ZipCodeFormatter 149
    - See also* formatter
  - ZipCodeValidator 133–134
  - Zoom effect 421, 436
    - properties 436